PHYSICAL REVIEW LETTERS

Contents

VOLUME 81, NUMBER 12 21 September 1998

Announcement
Missing Characters in the Paper Issues 8, 9, and 10 of Volume 81 2397

General Physics
Unified Approach to Hamiltonian Systems, Poisson Systems, Gradient Systems, and Systems with Lyapunov Functions or First Integrals 2399
Robert I. McLachlan, G. R. W. Quispel, and Nicolas Robidoux
Accurate Measurement of the Planck Constant 2404
Edwin R. Williams, Richard L. Steiner, David B. Newell, and Paul T. Olsen

Gravitation and Astrophysics
Quantization of AdS_3 Black Holes in External Fields: Semiclassical Results from Pure Gravity 2408
Roberto Emparan and Ivo Sachs
Pulsar Velocities without Neutrino Mass 2412
D. Grasso, H. Nunokawa, and J. W. F. Valle
Search for Strange Matter by Heavy Ion Activation 2416
M. C. Perillo Isaac, Y. D. Chan, R. Clark, M. A. Deleplanque, M. R. Dragowsky, P. Fallon, I. D. Goldman, R-M. Larimer, I. Y. Lee, A. O. Macchiavelli, R. W. MacLeod, K. Nishiizumi, E. B. Norman, L. S. Schroeder, and F. S. Stephens

Elementary Particles and Fields
Complete Wetting in Supersymmetric QCD: or Why QCD Strings Can End on Domain Walls 2420
A. Campos, K. Holland, and U.-J. Wiese
Plasmon Damping Rate for $T \rightarrow T_C$ 2424
Massimo Pietroni
Measurement of the Running of Effective QED Coupling at Large Momentum Transfer in the Spacelike Region 2428
S. Odaka *et al.* (VENUS Collaboration)
Observation of the B_c Meson in $p\overline{p}$ Collisions at $\sqrt{s} = 1.8$ TeV 2432
F. Abe *et al.* (CDF Collaboration)

Nuclear Physics
Disappearance of Elliptic Flow: A New Probe for the Nuclear Equation of State 2438
P. Danielewicz, Roy A. Lacey, P.-B. Gossiaux, C. Pinkenburg, P. Chung, J. M. Alexander, and R. L. McGrath

Atomic, Molecular, and Optical Physics
Spectral Properties of Nonhydrogenic Atoms in Weak External Fields 2442
Thibaut Jonckheere, Benoît Grémaud, and Dominique Delande
Photon-Number Squeezed Solitons from an Asymmetric Fiber-Optic Sagnac Interferometer 2446
S. Schmitt, J. Ficker, M. Wolff, F. König, A. Sizmann, and G. Leuchs

(Continued on Third Cover)

Copyright 1998 by The American Physical Society

CODEN: PRLTAO 81 (12), 2397–2618 (21 September 1998)

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Nonlinear Competition between Small and Large Hexagonal Patterns 2450
Mary Silber, and Michael R. E. Proctor

Plasma and Beam Physics

Unifying Role of Radial Electric Field Shear in the Confinement Trends of TFTR Supershot Plasmas 2454
D. R. Ernst, B. Coppi, S. D. Scott, M. Porkolab, and TFTR Group

Anomalous Resistance Induced by Chaos of Electron Motion and its Application to Plasma Production 2458
Z. Yoshida, H. Asakura, H. Kakuno, J. Morikawa, K. Takemura, S. Takizawa, and T. Uchida

Condensed Matter: Structure, etc.

Phonon Symmetry Selection Rules for Inelastic Neutron Scattering 2462
J. M. Perez-Mato, M. Aroyo, J. Hlinka, M. Quilichini, and R. Currat

Anomalous Isostructural Transformation in Ice VIII 2466
J. S. Tse and D. D. Klug

Fractal Dislocation Patterning During Plastic Deformation 2470
Peter Hähner, Karlheinz Bay, and Michael Zaiser

Breakdown of Fourier's Law near the Superfluid Transition in ^{4}He 2474
Peter K. Day, William A. Moeur, Steven S. McCready, Dmitri A. Sergatskov, Feng-Chuan Liu, and Robert V. Duncan

Competition of Multiple Spin Exchanges in Submonolayer Solid ^{3}He 2478
Hiroki Ikegami, Ken Obara, Daisuke Ito, and Hidehiko Ishimoto

Kinetics of Rapid Heterogeneous Reactions Accompanied by the Reshaping of Supported Catalyst Crystallites 2482
V. P. Zhdanov and B. Kasemo

Stable and Metastable InGaAs/GaAs Island Shapes and Surfactantlike Suppression of the Wetting Transformation 2486
R. Leon, C. Lobo, J. Zou, T. Romeo, and D. J. H. Cockayne

Stability of Solid State Reaction Fronts 2490
G. Grinstein, Yuhai Tu, and J. Tersoff

Stacked 2D Crystalline Sheets of the Membrane-Protein Bacteriorhodopsin: A Specular and Diffuse Reflectivity Study 2494
I. Koltover, T. Salditt, J.-L. Rigaud, and C. R. Safinya

Condensed Matter: Electronic Properties, etc.

Non-Fermi-Liquid Behavior of $SrRuO_3$: Evidence from Infrared Conductivity 2498
P. Kostic, Y. Okada, N. C. Collins, Z. Schlesinger, J. W. Reiner, L. Klein, A. Kapitulnik, T. H. Geballe, and M. R. Beasley

Extended Moment Formation and Second Neighbor Coupling in Li_2CuO_2 2502
Ruben Weht and W. E. Pickett

Universal Density of States for Carbon Nanotubes 2506
J. W. Mintmire and C. T. White

Reentrant Behavior and Strong Anisotropy of the Phase Boundary between Antiferro-Quadrupolar Ordered and Paramagnetic Phases in $Ce_xLa_{1-x}B_6$ in High Magnetic Fields 2510
M. Hiroi, S. Kobayashi, M. Sera, N. Kobayashi, and S. Kunii

Polaron Problem by Diagrammatic Quantum Monte Carlo 2514
Nikolai V. Prokof'ev and Boris V. Svistunov

Self-Duality in Quantum Impurity Problems 2518
P. Fendley and H. Saleur

Hysteresis and Spin Transitions in the Fractional Quantum Hall Effect 2522
H. Cho, J. B. Young, W. Kang, K. L. Campman, A. C. Gossard, M. Bichler, and W. Wegscheider

New Resistance Maxima in the Fractional Quantum Hall Effect Regime 2526
S. Kronmüller, W. Dietsche, J. Weis, K. von Klitzing, W. Wegscheider, and M. Bichler

(Continued on Preceding Page)

Contents (Continued)

Hall Anomaly and Vortex-Lattice Melting in Superconducting Single Crystal $YBa_2Cu_3O_{7-\delta}$ 2530
G. D'Anna, V. Berseth, L. Forró, A. Erb, and E. Walker

Origin of the Extended Van Hove region in Cuprate Superconductors 2534
Wei-Guo Yin, Chang-De Gong, and P. W. Leung

Superconducting Single-Mode Contact as a Microwave-Activated Quantum Interferometer 2538
L. Y. Gorelik, N. I. Lundin, V. S. Shumeiko, R. I. Shekhter, and M. Jonson

Directional Tunneling and Andreev Reflection on $YBa_2Cu_3O_{7-\delta}$ Single Crystals: Predominance of d-Wave Pairing Symmetry Verified with the Generalized Blonder, Tinkham, and Klapwijk Theory 2542
J. Y. T. Wei, N.-C. Yeh, D. F. Garrigus, and M. Strasik

Nonlinear Current Flow around Defects in Superconductors 2546
A. Gurevich and J. McDonald

Dynamics of the Infinite-Range Ising Spin-Glass Model in a Transverse Field 2550
M. J. Rozenberg and D. R. Grempel

Droplet Phenomenology and Mean Field in a Frustrated Disordered System 2554
J. Houdayer and O. C. Martin

Disordered XY Models and Coulomb Gases: Renormalization via Traveling Waves 2558
David Carpentier and Pierre Le Doussal

Structural and Magnetic Ordering of Chromium in Ag/Cr Multilayers 2562
S. Demuynck, J. Meersschaut, J. Dekoster, B. Swinnen, R. Moons, A. Vantomme, S. Cottenier, and M. Rots

Magnetic Field versus Temperature Phase Diagram of a Quasi-One-Dimensional $S = 1$ Heisenberg Antiferromagnet ... 2566
Z. Honda, H. Asakawa, and K. Katsumata

Linear Response Calculations of Spin Fluctuations 2570
S. Y. Savrasov

Large Absolute Band Gap in 2D Anisotropic Photonic Crystals 2574
Zhi-Yuan Li, Ben-Yuan Gu, and Guo-Zhen Yang

Exciton Formation and Relaxation Dynamics in Quantum Wires 2578
Rajesh Kumar, A. S. Vengurlekar, A. Venu Gopal, T. Mélin, F. Laruelle, B. Etienne, and J. Shah

Optical Modes in Photonic Molecules 2582
M. Bayer, T. Gutbrod, J. P. Reithmaier, A. Forchel, T. L. Reinecke, P. A. Knipp, A. A. Dremin, and V. D. Kulakovskii

Exciton Spin Relaxation in Semiconductor Quantum Wells: The Role of Disorder 2586
H. Nickolaus, H.-J. Wünsche, and F. Henneberger

Ablation of GaAs by Intense, Ultrafast Electronic Excitation from Highly Charged Ions 2590
T. Schenkel, A. V. Hamza, A. V. Barnes, D. H. Schneider, J. C. Banks, and B. L. Doyle

Interdisciplinary Physics: Biological Physics, Quantum Information, etc.

Decoherence-Free Subspaces for Quantum Computation 2594
D. A. Lidar, I. L. Chuang, and K. B. Whaley

Optimal Universal Quantum Cloning and State Estimation 2598
Dagmar Bruss, Artur Ekert, and Chiara Macchiavello

Traveling Nanoscale Structures in Reactive Adsorbates with Attractive Lateral Interactions 2602
M. Hildebrand, A. S. Mikhailov, and G. Ertl

Experimental Study of Laser-Induced Melting in Two-Dimensional Colloids 2606
Q.-H. Wei, C. Bechinger, D. Rudhardt, and P. Leiderer

Simulations of Interacting Membranes in the Soft Confinement Regime 2610
Nikolai Gouliaev and John F. Nagle

Entanglement, Elasticity, and Viscous Relaxation of Actin Solutions 2614
B. Hinner, M. Tempel, E. Sackmann, K. Kroy, and E. Frey

Errata

Erratum: Degenerate Wannier Theory for Multiple Ionization [Phys. Rev. Lett. **80**, 5081 (1998)] 2618
Thomas Pattard and Jan M. Rost